

## CLAIMS:

1. Method for generating a channel code with DC control comprising the steps of:

- converting a stream of P n-bit input words into a stream of P m-bit code words
- converting the stream of P m-bit code words into an output stream of P m-bit

5 output words using a NRZI converter

characterized in that the method comprises the following steps

- determining a running digital sum of the output stream of output words
- in response to the running digital sum replacing a sequence of Q m-bit code

10 words, by a replacement sequence of Q m-bit replacement code words, the replacement sequence being equally long and having a different parity than the sequence of code words it replaces, and never occurring in a stream of m-bit code words when converting any stream of n-bit input words into m-bit code words

2. Method as claimed in claim 1,

15 characterized in that the method is employed after a further method of DC control.

3. Method as claimed in claim 2,

characterized in that each method determines the running digital sum taking into consideration effects of the other method in the running digital sum.

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4. Method as claimed in claim 1, 2 or 3,

characterized in that converting a stream of P n-bit words into a stream of P m-bit code words is achieved with a parity preserving coder.

25 5. Method as claimed in claim 1, 2, 3 or 4,

characterized in that Q is equal or larger than 4.

6. Method as claimed in claim 1, 2, 3, 4 or 5

characterized in that a code constraint of the channel code is preserved.

7. Method as claimed in claim 4, 5, or 6

characterized in that a 17PP coder performs the conversion from n-bit input words into a  
5 stream of m-bit words.

8. Method as claimed in claim 4, 5, 6, or 7,

characterized in that the replacement sequence is chosen from the following table:

	1: 101 001 010 100	->	100 100 100 100
10	2: 010 001 000 101	->	010 000 000 101
	3: 001 001 000 101	->	001 000 000 101
	4: 101 000 010 010	->	100 100 000 010
	5: 101 001 000 001	->	100 100 000 001
	6: 101 000 100 101	->	101 000 000 101
15	7: 101 000 100 010	->	101 000 000 010

9. Coding device using the method as claimed in one of the previous claims

10. Recording device comprising the coding device as claimed in claim 9

11. Signal comprising a stream of code word obtained using the method as  
20 claimed in claim 1, 2, 3, 4, 5, 6, 7 or 8.

12. Record carrier comprising a signal as claimed in claim 11

13. Reading device for reading a record carrier as claimed in claim 12